

PLANTS FOR CONSERVATION IN THE NORTHEAST

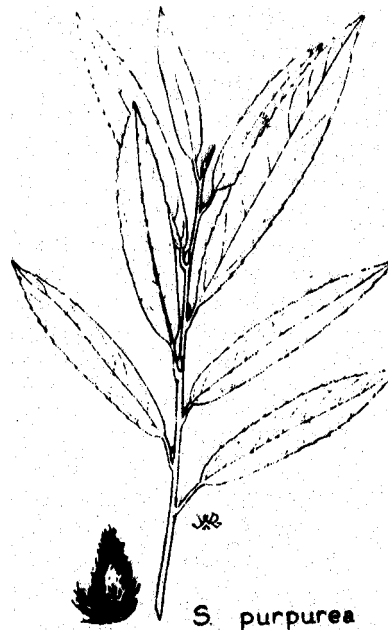
USDA - SOIL CONSERVATION SERVICE

CONSERVATION PLANT SHEET-31

PURPLEOSIER WILLOW
(*Salix purpurea* L.)

Uses: Purpleosier willow is used extensively to control erosion along streambanks resulting from flood and ice damage. Its fast growth, resilient stems, and ability to recover from mechanical damage make it an ideal plant for this use. When used in this manner, it provides cover for small animals and browse for deer, beaver and rabbits. The whips are useful in vineyards for tying up grapevines and in basket making.

Description: Purpleosier willow is a medium to tall introduced shrub growing 10 to 20 feet high, with smooth, slender, tough, resilient branches, purplish at first but later changing to gray or olive-gray. The leaves arise in pairs but not quite oppositely, are smooth tongue-shaped, finely-toothed near the tip only, two to four inches long, bluish-green above and pale below. The catkins are small, arise in almost opposite pairs, and mature in spring before the leaves come out.



Purpleosier willow is a thicket-forming shrub, sending up many branches from the roots. It spreads by stolons and layering of branches. Growth is rapid, reaching about two to five feet in two years; often to full height in five years. This species is also called basket willow.

Varieties: A variety of purpleosier willow was released by the Big Flats Plant Materials Center in 1975 called 'Streamco'. Rooted and unrooted cuttings can be purchased from a variety of nurseries in the Northeast.

Adaptation: Purpleosier willow is climatically adapted to all the northeastern states. Well-drained to imperfectly-drained soils are most suitable for this species. It can be used on soils of any texture excepting

those of low fertility.

Establishment: Purpleosier willow **is** susceptible to severe browsing by livestock and cannot be established without protection. For streambanks in pastures, livestock must be excluded. Trees should be removed from banks where plantings are to be made, especially in locations where the current may undercut and cause them to fall into the stream. Banks that are eroded and undercut to a steep unplantable slope require grading prior to planting,

Plant with one year old rooted cuttings, or fresh hardwood cuttings. If fresh cuttings are used, they should be $3/8$ to $1/2$ inch at the thick end, 12 to 15 inches long, and made before the leaves come out. Planting should be as soon as possible after cutting; the cuttings being kept damp in the interim.

Fresh cuttings should be planted vertically with only an inch or two protruding. If they cannot be pushed in the soil by hand, use a rod to make a hole but be sure the cutting is tamped in well with the heel to avoid leaving any air spaces. If the soil is too stony to handle this way, the cutting may be buried horizontally about two inches deep in damp soil. Rooted cuttings should be planted in a hole dug big enough to accommodate the root system when well-spread. The soil must be tamped well around the roots. Larger stems several feet long can be planted with butt in soil beneath water and stem laying up the bank,

On difficult streambanks, it is sometimes necessary to mulch the planting with coarse plant material, even wiring and staking the mulch down in some cases. Plant at two to three foot spacing from just above water's edge to top of bank. If toe of slope is rip-rapped, plant above the stone.

Management: Purpleosier willow used on streambanks is subject to considerable mechanical damage. The site should be inspected annually in the spring after heavy run-off is past, and checked for needed repairs. Gaps should be filled in by replanting, or laying down and covering branches of nearby plants. Any mechanical measures used to control the bank, as for example, stone rip-rap, must be kept in repair in order to maintain the effective willow cover,

Northeast Technical Service Center
Broome 11, Pennsylvania
September 1975